

Please note.

At page 9, lines 15-20, please replace the paragraph contained therein with the following:

Next, the bent part of the fiber is further soaked in another solution to activate its surface hydroxyl groups. In a preferred embodiment, this is accomplished by soaking the bent part of the fiber in a solution which is at least 2 M NaOH solution for at least 12 hours to activate its surface hydroxyl groups. After rinsing the bent probe with DI water, it is coated with sol-gel silica, by for example, dipping it into a silica sol solution at least six times. The coated probe is then kept in a refrigerator for at least 12 hours overnight before use.

At page 9, line 21 to page 10, line 4, please replace the paragraph contained therein with the following:

In an embodiment, the sol-gel silica coating solution is made by hydrolysis of a liquid ester of a silicic acid in the presence of a trace catalyst. Examples of a liquid ester of a silicic acid include tetramethyl orthosilicate and tetraethyl orthosilicate. In an embodiment, a suitable trace catalyst is ~~an hydrochloric acid or ammonia or~~ a mineral acid catalyst such as hydrochloric acid as described in Tao et al., Optics Letters, vol. 27, 1382-1384 (2002). The resulting liquid sol solution of silicic acid and organic alcohol is stored in a refrigerator before use. The silicic acid molecules in the liquid react slowly with each other to form a polymer during the storage. In a preferred embodiment, the coating of the probe is applied within twelve hours after the hydrolysis.

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→ 18
At page 18, lines 1-6, please replace the paragraph contained therein with the following:

Therefore, a protective coating, which is permeable to water vapor but blocks out liquid water, is essential to isolate the sol-gel silica coating from soil water. In an embodiment, silicone rubber is chosen as the protective coating material. One example of a silicone coating method

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